

ARTICLE VII.—*First Supplement to the Check-List of the Coccidae.* BY T. D. A. COCKERELL, *New Mexico Agricultural Experiment Station.*

Since the publication of the Check-List\* in 1896 no less than three hundred and twenty-two species have been added. A few of these are old species which had been accidentally omitted or improperly reduced to synonyms, but the number of actually new species is very great, and bears witness to the activity of coccidologists. Forty species, given as valid in the Check-List, are here reduced to varieties or synonyms.

As before, I have included a number of names of species (mostly by Green) which I know to be either in press or awaiting very early publication.

The group *Idiococcinae* has been abandoned and merged into *Coccinae*. The *Coccinae* could very well be divided into two subfamilies and perhaps four tribes, as follows:

- (A.) *Coccinae*. Newly hatched larva with rows of dorsal spines, and the last antennal joint usually short.
- (1.) *Coccini*. Anal ring hairless. (*Coccus*, etc.)
  - (2.) *Eriococcini*. Anal ring hairy, hairs normally 8. (*Eriococcus*, etc.)
- (B.) *Dactylopiinae*. Newly hatched larva without dorsal spines, last antennal joint usually long.
- (1.) *Sphaerococcini*. Anal ring hairless. (*Sphaerococcus*.)
  - (2.) *Dactylopiini*. Anal ring hairy, hairs normally 6. (*Dactylopius*, etc.)

Species which were in the original list, here repeated to indicate varieties, synonyms, etc., have the original numbers.

Since the Check-List was written, the following new writers have described and named *Coccidae*. To facilitate correspondence I give their addresses:

Bogue, E. E., Stillwater, Oklahoma.

Cooley, R. A., Agricultural College, Amherst, Mass.

\*Article XI, Vol. V., of this series.

Charmoy, D. d'Emmerez de, Port Louis, Mauritius.

Ehrhorn, E. M., Mountain View, Sta. Clara Co., Cal.

Fuller, Claude, Department of Agriculture, Cape Town,  
S. Africa.

Hunter, S. J., Lawrence, Kansas.

Ibering, H. von, S. Paulo, Brazil.

King, G. B., Lawrence, Mass.

Leonardi, G., Portici, Italy.

Lidgett, J., Myrmiong, Victoria, Australia.

Newell, W., Ames, Iowa.

Pergande, Theo., Dept. Agriculture, Washington, D. C.

Tinsley, J. D., Mesilla Park, New Mexico.

I may also permit myself to mention that my own address is now Mesilla Park, New Mexico. (Not Mesilla, nor Las Cruces.)

### COCCIDLE.

#### Monophlebinae.

*Callipappus*, Guér.<sup>(1)</sup>

798. *farinosus*, Full.

799. *bufo*, Full.

*Protortonia*, Towns.<sup>(2)</sup>

800. *mexicanorum*, Ckll.

801. *primitiva*, Towns.

*Icerya*, Sign.

39. *purchasi*, Mask.

*v. maskelli*, Ckll.

*v. crawii*, Ckll.

42. *seychellarum*, Westw.

*v. albobutea*, Ckll.

802. *formicarum*, Newst.

s. g. *Proticerya*, Ckll.

803. *littoralis*, Ckll.

*v. mimosa*, Ckll.

*Crypticerya*, Ckll.

804. *nudata*, Mask.

805. *ewarti*, Newst.

806. *hempeli*, Ckll.

807. *townsendi*, Ckll.

*v. pluchea*, Ckll.

#### Margarodinae.

*Margarodes*, Guild.

57. *formicarum*, Guild.

*v. rileyi*, Giard.

808. *trimeni*, Giard.

s. g. *Spharaspis*, Giard.

809. *capensis*, Giard.

#### Ortheziinae.

*Orthezia*, Bosc.

810. *delavauxi*, Thieb.

811. *artemisia*, Ckll.

812. *cheilanthes*, Tinsl.

813. *graminis*, Tinsl.

814. *monticola*, Ckll.

815. *garryae*, Ckll.

*Ortheziola*, Sulc.

816. *signoreti*, Haller.

817. *fodiens*, Giard.

(1.) Mr. Fuller states that *Colostoma australe*, *immaculatum* and *rubiginosum*, of Maskell, belong to *Callipappus*.

(2.) The name *Ortonia* is preoccupied.

**Coccinae.****Coccus, L.**<sup>(3.)</sup>

818. *opuntiae*, Licht. MS., Ckll.  
? s. of *tomentosus*, Lam.  
v. *newsteadi*, Ckll.
819. *acaciæ*, Mask.

**Eriococcus, Targ.**

820. *formicicola*, Newst.
821. *thymelææ*, Newst.
822. *devoniensis*, Green.
823. *greeni*, Newst.
824. *gilletti*, Tinsl.
825. *arenosus*, Ckll.
826. *tinsleyi*, Ckll.
827. *adenostomæ*, Ehrh.
828. *spiniger*, Mask.
829. *simplex*, Mask.  
v. *dealbata*, Mask.
84. *paradoxus*, Mask.  
v. *simplex*, Mask.  
v. *indica*, Mask.
830. *exiguus*, Mask.
831. *graminis*, Mask.
832. *elegans*, Full.
833. *apiomorpha*, Full.
834. *hakeæ*, Full.
835. *imperfectus*, Full.
836. *tricarinatus*, Full.
837. *agonis*, Full.
838. *cypreæformis*, Full.

**Olliffia, Full.**

839. *eucalypti*, Full.

**Rhizococcus, Sign.**

840. *tripartitus*, Full.
100. *casuarinæ*, Mask.  
v. *maneus*, Mask.

**Lachnodius, Mask.**

203. *eucalypti*, Mask.
841. *lectularius*, Mask.
842. *hirtus*, Mask.

**Dactylopius, Costa.**

843. *syringæ*, Mask.

844. *edgeworthiæ*, Ckll.
845. *hirsutus*, Newst.
846. *prosopidis*, Ckll.
847. *gutierreziæ*, Ckll.
848. *dasyliirii*, Ckll.
175. *sorghiiellus*, Forbes.  
v. *kingii*, Ckll.  
v. *neomexicanus*, Tinsl.
849. *lichtensioides*, Ckll.
850. *pseudonipæ*, Ckll.
851. *claviger*, King & Tinsl.
852. *quaintancii*, Tinsl.
853. *azalææ*, Tinsl.
854. *cockerelli*, King & Tinsl.
855. *bambusæ*, Green.
856. *rimulæ*, Green.
857. *lanigerus*, Full.
858. *macrozamiæ*, Full.
859. *similans*, Lidgett.
194. *graminis*, Mask.  
v. *orientalis*, Mask.
205. *calceolaria*, Mask  
v. *minor*, Mask.
177. *virgatus*, Ckll.  
s. *ceriferus*, Newst.  
s. *talini*, Green.

**Phenacoccus, Ckll.**

860. *comari*, Knowl.
861. *solenopsis*, Tinsl.
862. *americana*, King & Ckll.
140. *helianthi*, Ckll.  
v. *gossypii*, Towns. & Ckll.
1121. *minimus*, Tinsl.

**Ripersia, Sign.**

863. *europæa*, Newst.
864. *tumida*, Newst.
865. *filicicola*, Newst.
866. *montana*, Newst.
867. *kingii*, Ckll.
868. *lasii*, Ckll.
869. *flaveola*, Ckll.
870. *blanchardii*, King & Ckll.
871. *euneiformis*, Green.
872. *myrmecophila*, Mask.

(3.) Mr. E. E. Green informs me that *Coccus laniger*, W. F. Kirb., is *Walkeriana floriger*.

1122. *minima*, *Tinsl. and King.*  
 873. *villosa*, *Ehrh.*  
*s. g. Apterococcus*, *Newst.*  
 121. *fraxini*, *Newst.*  
*s. g. Cryptoripersia*, *Ckll.*  
 874. *arizonensis*, *Ehrh.*  
*s. g. Pseudoripersia*, *Ckll.*<sup>(4)</sup>  
 89. *turgipes*, *Mask.*
- Tylococcus*, *Newst.*  
 875. *madagascariensis*, *Newst.*
- Ceroputo*, *Sulc.*  
 876. *pilosella*, *Sulc.*
- Rhizæcus*, *Künck.*  
 877. *eloti*, *Giard.*
- Solenococcus*, *Ckll.*<sup>(5)</sup>  
 878. *koebeleri*, *Ckll.*  
 879. *ornatus*, *Green.*  
 880. *coloradensis*, *Ckll.*
- Cerococcus*, *Comst.*  
 881. *corticis*, *Towns. & Ckll.*
- Porococcus*, *Ckll.*  
 882. *tinctorius*, *Ckll.*  
 883. *pergandei*, *Ckll.*
- Carpochloroides*, *Ckll.*  
 884. *viridis*, *Ckll.*
- Capulinia*, *Sign.*  
 885. *jaboticaba*, *con Ther.*
- Malloccoccus*, *Mask.*  
 (Mallophora, *Mask.*, preocc.)  
 886. *sinensis*, *Mask.*
- Ourococcus*, *Full.*  
 887. *cobbii*, *Full.*  
 888. *eucalypti*, *Full.*  
 889. *casuarinæ*, *Full.*
- Kermicus*, *Newst.*  
 890. *wroughtoni*, *Newst.*  
*s. g. Chatococcus*, *Mask.*<sup>(6)</sup>  
 318. *bambusæ*, *Mask.*  
 891. *graminis*, *Mask.*
- Sphaerococcus*, *Mask.*  
 892. *rugosus*, *Mask.*  
*v. elongatus*, *Mask.*  
 893. *pulehellus*, *Mask.*  
 894. *socialis*, *Mask.*  
 319. *acaciæ*, *Mask.*  
*v. melaleucæ*, *Full.*  
 895. *leaii*, *Full.*  
 896. *tepperi*, *Full.*  
 897. *ethelæ*, *Full.*  
 898. *morrisoni*, *Full.*  
 899. *obscuratus*, *Mask.*  
 323. *inflatipes*, *Mask.*  
*v. simplicior*, *Mask.*  
 900. *populi*, *Mask.*  
 901. *parvus*, *Mask.*  
 1120. *sylvestris*, *Ckll. & King.*
- Olliffiella*, *Ckll.*  
 902. *cristicola*, *Ckll.*
- Cylindrococcus*, *Mask.*  
 903. *gracilis*, *Full.*  
 331. *amplior*, *Mask.*  
*s. Crocidocysta froggatti*,  
*Rübs.*
- Asterolecaniinae.**
- Lecaniodiaspis*, *Targ.*  
 904. *tessellatus*, *Ckll.*  
 905. *artemisiæ*, *Ckll.*  
 906. *mimosæ*, *Mask.*  
 907. *radiatus*, *Ckll.*  
 908. *manihotis*, *Towns.*  
 909. *atherosperma*, *Mask.*  
 910. *melaleucæ*, *Full.*

(4.) New subgenus. Well distinguished by the very peculiar legs, as figured by Maskell, *Trans. N. Z. Inst.*, Vol. XXV.

(5.) New name for *Solenophora*, preoccupied. A *Solenophora* (?) *dryandrae* was published without description by Fuller: the author now wishes to withdraw it.

(6.) *Chatococcus* has only 8 (sometimes 6?) hairs on the anal ring: *Kermicus* proper has 17. Otherwise they hardly differ. The larva is *Dactyloptine*.

**Asterolecanium**, Targ.

912. *algeriense*, *Newst.*  
 913. *ilicis*, *Newst.*  
 914. *petrophila*, *Full.*  
 915. *hakeæ*, *Full.*  
 254. *bryoides*, *Mask.*  
     *v. stellata*, *Mask.*  
 255. *bambusæ*, *Boisd.*  
     *v. bambusula*, *Ckll.*

**Tachardiinae.****Tachardia**, Blanch.

916. *nigra*, *Towns. & Ckll.*  
 917. *fulvoradiata*, *Ckll.*

**Brachyscelinae.****Apiomorpha**, Rübs.<sup>(7.)</sup>

918. *helmsii*, *Full.*  
 919. *maliformis*, *Full.*  
 920. *cucurbita*, *Full.*  
 300. *karschi*, *Rübs.*  
     *v. fletcheri*, *Full.*  
 292. *thorntoni*, *Frog.*  
     *v. nux.*, *Full.*  
 283. *conica*, *Frog.*  
     *s. regularis*, *Tepp.*  
     *s. similis*, *Rübs.*  
 275. *munita*, *Schrad.*  
     *s. cornifex*, *Rübs.*  
     *v. tricornis*, *Frog.*  
 297. *strombylosa*, *Tepp.*  
     *s. crispa*, *Full.*  
 294. *urnalis*, *Tepp.*  
     *v. schraderei*, *Full.*  
 921. *excupula*, *Full.*

**Ascelis**, Schrad.

922. *melaleucæ*, *Full.*

**Opisthoscelis**, Schrad.

923. *conica*, *Full.*

**Cystococcus**, Full.

924. *echiniformis*, *Full.*

**Lecaniinae.****Kermes**, Auctt.

925. *austini*, *Ehrh.*  
 926. *pettiti*, *Ehrh.*  
 927. *ceriferus*, *Ehrh.*  
 928. *kingii*, *Ckll.*  
 929. *nivalis*, *King & Ckll.*  
 930. *pubescens*, *Boque.*  
 931. *boguei*, *Ckll.*  
 932. *cockerelli*, *Ehrh.*  
 933. *nigropunctatus*, *Ehrh. & Ckll.*  
 934. *concinulus*, *Ckll.*  
 935. *grandis*, *Ckll.*

**Aclerda**, Sign.

936. *distorta*, *Green.*  
 1123. *berlesii*, *Buffa.*

**Lecanopsis**, Targ.

937. *lineolata*, *King & Ckll.*

**Lecanium**, Illig.

938. *ceratonia*, *Genz.*  
     ? *s. of hesperidum*, *L.*  
 939. *perlatum*, *Ckll.*  
 446. *hesperidum*, *Lin.*  
     *s. patelliformis*, *Curt.*<sup>(8.)</sup>  
     *v. alienum*, *Dougl.*<sup>(9.)</sup>  
 447. *minimum*, *Newst.*  
     *v. pinicola*, *Mask.*  
 449. *tessellatum*, *Sign.*  
     *v. swainsonæ*, *Ckll.*  
     *v. perforatum*, *Newst.*<sup>(450.)</sup>  
 940. *flaveolum*, *Ckll.*  
 941. *ventrale*, *Ehrh.*  
 942. *impar*, *Ckll.*  
 943. *rhizophoræ*, *Ckll.*  
 944. *chilaspidis*, *Ckll.*  
 945. *erythrina*, *von Iher.*  
 946. *perconvexum*, *Ckll.*  
 947. *tuberculatum*, *Towns. & Ckll.*  
 948. *townsendi*, *Ckll.*  
 486. *serobiculatum*, *Mask.*

(7.) The changes in the synonymy are made on the authority of Mr. Fuller.

(8.) So given on Mr. Newstead's authority.

(9.) So given on Mr. Green's authority.

- v. leve*, *Mask.*  
*v. pingue*, *Mask.* (485.)  
 949. *strachani*, *Ckll.*  
 950. *castilloa*, *Ckll.*  
 469. *viride*, *Green.*  
     *v. africanum*, *Newst.*  
 951. *ficus*, *Mask.*  
 952. *globulosum*, *Mask.*  
 953. *notatum*, *Mask.*  
 954. *mirificum*, *Mask.*  
 955. *macrozamia*, *Full.*<sup>(10)</sup>  
 956. *melaleuca*, *Mask.*  
 957. *casuarina*, *Mask.*  
 487. *baccatum*, *Mask.*  
     *v. marmoreum*, *Full.*  
 958. *tubuliferum*, *Ckll.*  
 959. *turgidum*, *Ckll.*  
 960. *parvicorne*, *Ckll.*  
*s. g. Pseudokernes*, *Ckll.*  
 961. *armatum*, *Ckll.*  
*s. g. Eulecanium*, *Ckll.*  
 528. *quercitronis*, *Fitch.*  
     *s. kermoides*, *Tyrrell.*  
 498. *berberidis*, *Schr.*  
     *v. major*, *Mask.*  
 962. *nigrofasciatum*, *Pergande.*  
 963. *magnoliarum*, *Ckll.*  
 964. *pubescens*, *Ehrh.*  
 965. *crawii*, *Ehrh.*  
 966. *kingii*, *Ckll.*  
 967. *macluratum*, *Ckll.*  
 968. *caryarum*, *Ckll.*  
 969. *perditum*, *Ckll.*  
 970. *subaustrale*, *Ckll.*
- Ceroplastes**, *Gray.*  
 409. *irregularis*, *Ckll.*  
     *v. rubidus*, *Ckll.*  
 426. *rubens*, *Mask.*  
     *v. minor*, *Mask.*  
 407. *rusei*, *Linn.*  
     *s. carica*, *Fonse.*  
     *s. testudinens*, *Costa.*  
     *s. testudinata*, *Targ.*  
 971. *nerii*, *Newst.*  
 972. *angulatus*, *Ckll.*  
 973. *coloratus*, *Ckll.*  
 974. *minutus*, *Ckll.*  
 975. *roseatus*, *Towns. & Ckll.*  
 976. *confluens*, *Ckll. & Tinsl.*  
 977. *personatus*, *Newst.*
- Inglisia**, *Mask.*  
 978. *fossilis*, *Mask.*  
 400. *foraminifer*, *Mask.*  
     *v. loranthi*, *Full.*  
 979. *malvacearum*, *Ckll.*
- Platinglisia**, *Ckll.*  
 980. *noacki*, *Ckll.*
- Ctenochiton**, *Mask.*  
 981. *aztecus*, *Towns. & Ckll.*  
 982. *nuytisia*, *Full.*<sup>(11)</sup>
- Ceronema**, *Mask.*  
 983. *dryandrae*, *Full.*  
 984. *japonicum*, *Mask.*
- Pulvinaria**, *Targ.*  
 985. *salicis*, *Bouché.*  
 361. *bigeloviae*, *Ckll.*  
     *v. marmorata*, *Ckll.*  
 986. *amygdali*, *Ckll.*  
 987. *acericola*, *Walsh & Riley.*  
 359. *innumerabilis*, *Rathr.*  
     *s. acericoorticis*, *Fitch.*  
     *v. occidentalis*, *Ckll.*  
     *v. tiliae*, *King & Ckll.*  
 988. *rhois*, *Ehrh.*  
 989. *cellulosa*, *Green.*  
 990. *thompsoni*, *Mask.*  
 372. *maskelli*, *Olliff.*  
     *v. viminaria*, *Full.*  
     *v. nuytisia*, *Full.*  
 991. *floccifera*, *Westw.*

(10.) Mr. Fuller tells me this is probably a variety of *L. frenchii*.

(11.) Mr. Fuller no longer considers this valid.

s. g. *Philephedra*, Ckll.

992. ephedrae, Ckll.

s. g. *Protopulvinaria*, Ckll.

378. pyriformis, Ckll.

s. newsteadi, Leon.

*Lichtensia*, Sign.

993. mimosa. Towns. and Ckll.

994. crescentiae, Ckll.

995. hakearum, Full.<sup>12</sup>

*Pseudophilippia*, Ckll.

996. quaintancii, Ckll.

### Conchaspinae.

*Conchaspis*, Ckll.

997. socialis, Green.

998. newsteadi, Ckll.

### Diaspinae.

*Aspidiotus*, Bouché.

548. hederæ, Vall.<sup>13</sup>

? s. capparidis, Vall.

s. nerii, Bouché.

s. affinis, Targ.

s. ceratoniae, Sign.

s. ericæ, Boisd.

s. denticulatus, Targ.

s. genistæ, Westw.

s. gnidii, Sign.

s. corinocarpi, Colv.<sup>14</sup>

s. ilicis, Sign.

s. lentisei, Sign.

s. oleæ, Colv.<sup>14</sup>

s. villosus, Targ.

s. aloes, Boisd.

s. budleia, Sign.

s. cycadicola, Boisd.

s. epidendri, Bouché.

s. myrsinae, Sign.

s. obliquus, Costa.

s. bouchei, Targ.

s. palmarum, Bouché.

s. vriesiae, Sign.

s. carpodeti, Mask.

999. transparentis, Green.

v. similimus, Ckll.

1000. persearum, Ckll.

1001. britannicus, Newst.

1002. fraxini, "Alum," Henry.

1003. maculatus, Newst.

1004. exesus, Green.

1005. putearius, Green.

1006. moorei, Green.

1007. artocarpi, Green.

1008. bilobis, Mask.

1009. implicatus, Mask.

1010. virescens, Mask.

1011. dryandrae, Full.

1012. niveus, Full.

626. eucalypti, Mask.

v. conatus, Mask.

s. g. *Morganella*, Ckll.

1013. maskelli, Ckll.

s. ornatus, Mask.

s. g. *Targionia*, Sign.

1014. bigeloviae, Ckll.

1015. dearnessi, Ckll.

1016. yuccarum, Ckll.

s. g. *Odonaspis*, Leon.

(*Spatheaspis*, Leon.)

1017. inusitatus, Green.

1018. bambusarum, Ckll.

560. secretus, Ckll.

v. lobulatus, Mask.

1019. canaliculatus, Green.

s. g. *Selenaspis*, Ckll.

603. articulatus, Morg.

v. celastri, Mask.

s. g. *Phaulaspis*, Leon.

1020. hakeæ, Mask.

s. g. *Chentruspis*, Leon.

622. unilobis, Mask.

s. g. *Aspidiella*, Leon.

612. sacchari, Ckll.

(12.) Described as a doubtful *Lecaniodiaspis*. I have specimens from Fuller.

(13.) The synonymy, except the first name, is after Berlese and Leonardi. The names cited as synonyms doubtless represent at least several good varieties. *A. histerae* is the type of subg. *Eraspidiotus*, Leonardi.

- s. g. *Pseudaonidia*, Ckll. *v. leonis*, Towns. and Ckll.  
 620. trilobitiformis, *Green*. 1036. rhizophora, Ckll.  
     *s. darutyi*, *d'Emmezez de Chermoy*. s. g. *Melanaspis*, Ckll.  
     1037. setiger, *Mask*.  
 s. g. *Diaspidiotus* (Berl. & Leon.), 1038. lilacinus, Ckll.  
 Ckll. 1039. calurus, Ckll.  
 579. perniciosus, *Comst.* s. g. *Mycetaspis*, Ckll.  
     *v. andromelas*, Ckll. 604. personatus, *Comst.*  
     *v. albopunctatus*, Ckll. (785.) s. g. *Aonidiella*, Berl. & Leon.  
     ? *v. eucalypti*, Full. (14.) 570. aurantii, *Mask*.  
 1021. fernaldi, Ckll. *Pseudodiaspis*, Ckll.  
     *v. albiventer*, *Hunter*. 1040. larrea, Ckll.  
 1022. osborni, *Newell & Ckll.* 1041. dentilobis, Ckll.  
 1023. coniferarum, Ckll.  
 584. ancyllus, *Putn.* *Comstockiella*, Ckll.  
     *v. serratus*, *Newell & Ckll.* 638. sabilis, *Comst.*  
 587. asculi, *W. G. Johns.* *v. mexicanus*, Ckll.  
     *v. solus*, *Hunter*.  
 589. juglans-regiae, *Comst.* *Cryptophyllaspis*, Ckll.  
     *v. kaffae*, Ckll. 619. occultus, *Green*.  
 1024. jatrophae, *Towns. & Ckll.*  
 1025. subsimilis, Ckll. *Maskellia*, Full.  
 s. g. *Hemiberlesia*, Ckll. 1042. globosa, Full.  
     (*Aspidites*, *Berl. & Leon.*  
     preocc.)  
 568. rapax, *Comst.* *Xerophilaspis*, Ckll.  
     *s. evonymi*, *Targ.* 1043. prosopidis, Ckll.  
 1026. ulmi, *W. G. Johns.* *Gymnaspis*, *Newst.*  
 1027. tricolor, Ckll. 1044. velmeae, *Newst.*  
 588. cydoniae, *Comst.* 1045. bullata, *Green*.  
     *v. tectus*, *Mask*.  
 1028. crawii, Ckll. *Greeniella*, Ckll.  
 1029. greenii, Ckll. 772. cornigera, *Green*.  
 1030. cupressi, Ckll. *Aonidia*, *Sign.*  
*Chrysomphalus*, *Ashm.* 1046. loranthi, *Green*.  
 1031. reniformis, Ckll. 1047. obscura, *Green*.  
 606. dictyospermi, *Morg.* 1048. messnae, *Green*.  
     *v. mangiferae*, Ckll. (607.) 1049. ebeni, *Green*.  
 1032. longissimus, Ckll. 1050. planchonioides, *Green*.  
 1033. agavis, *Towns. and Ckll.* 1051. elvagnûs, *Mask*.  
 1034. koebelei, *Towns. and Ckll.* 1052. banksiae, Full.  
 1035. albopictus, Ckll. 1053. distinctissima, *Newst.*

(14.) I do not think Fuller's *eucalypti* belongs to *perniciosus*. Mr. Fuller kindly sent me two slides of it, but on these are apparently three different things: the one which I suppose to be *eucalypti* is immature.



*Poliaspis*, Mask.

(Maskelliella, Leon.)

1054. pini, Mask.

1055. nitens, Full.

1056. intermedia, Full.

*Fiorinia*, Targ.

757. fioriniæ, Targ.

s. palmae, Green.

s. pinicola, Mask.

v. minor, Mask.

755. acaciæ, Mask.

v. bilobis, Full.

757. rubra, Mask.

v. propinqua, Mask.

1057. casuarinæ, Mask.

1058. signata, Mask.

1059. tenuis, Mask.

1060. similis, Green.

1061. bambusæ, Mask.

1062. nephelii, Mask.

*Ischnaspis*, Dougl.

680. longirostris, Sign.

s. filiformis, Dougl. (752.)

*Leucaspis*, Sign.

1063. japonica, Ckll.

*Parlatoria*, Sign.

1064. affinis, Newst.

666. theæ, Ckll.

v. euonymi, Ckll.

668. proteus, Curt.

s. orbicularis, Targ.

v. pergandei, Comst. (667.)

v. virescens, Mask.

v. palmae, Mask.

1065. cingala, Green.

1066. mytilaspiformis, Green.

1067. aonidiformis, Green.

1068. sinensis, Mask.

1069. perpusilla, Mask.

1070. viridis, Full.

1071. dryandræ, Full.

*Pseudoparlatoria*, Ckll.

1072. noacki, Ckll.

1073. serrulata, Towns. &amp; Ckll.

*Mytilaspis*, Sign.<sup>(15)</sup>

675. pomorum, Bouché.

v. saliceti, Bouché.

1124. confusus, Horvath.

s. abietis, Sign nec Schr.

1074. ceratoniae, Germ.

1075. minima, Newst.

1076. ampelodesmæ, Newst.

1077. serrifrons, Leon.

1078. machili, Mask.

676. erawii, Ckll.

v. canaliculata, Mask.

678. citricola, Pack.

v. tasmaniae, Mask.

1079. perlonga, Ckll.

1080. mexicana, Ckll.

1081. argentata, Ckll.

1082. bambusicola, Ckll.

1083. cocculi, Green.

685. pallida, Green.

v. maskelli, Ckll.

689. pallens, Mask.

v. alba, Mask.

692. spinifera, Mask.

v. major, Mask.

1084. acaciæ, Mask

v. albida, Mask.

1085. banksiæ, Mask.

1086. melaleucæ, Mask.

1087. maideni, Mask.

1088. defecta, Mask.

v. tinctoria, Mask.

*Pinnaspis*, Ckll.

705. pandani, Comst.

v. alba, Ckll.

*Hemichionaspis*, Ckll.

718. aspidistræ, Sign.

(15) Leonard has separated from *Mytilaspis* groups which he treats as genera, named *Phaenomytilus*, *Coccomytilus* and *Trichomytilus*. I have proposed the subg. *Opuntiaspis* for *M. philococcus*.

- r. braziliensis*, *Sign.* (720.) 1101. *chinensis*, *Ckll.*  
*r. theae*, *Mask.* (734.) 1102. *latissima*, *Ckll.*  
*r. lata*, *Ckll.* (716.) 1103. *aucubae*, *Cooley.*  
 722. *minor*, *Mask.* 1104. *wistariae*, *Cooley.*  
 1105. *cockerelli*, *Cooley.*
- Chionaspis*, *Sign.*<sup>(16)</sup>**
712. *salicis*, *Linn.*<sup>(17)</sup>  
     *s. alni*, *Sign.* (708.)  
     *s. fraxini*, *Sign.* (713.)  
 1089. *striata*, *Newst.*  
 1090. *berlesii*, *Leon.*  
 1091. *quereûs*, *Comst.*  
 1092. *caryae*, *Cooley.*  
 1125. *platani*, *Cooley.*  
 725. *furfurus*, *Fitch.*  
     *v. ulmi*, *Ckll.*  
     *v. fulva*, *King.*  
 726. *salicis-nigrae*, *Walsh.*  
     *s. bruneri*, *Ckll.*<sup>(18)</sup>  
 728. *pinifoliae*, *Fitch.*  
     *v. heterophyllae*, *Cooley.*  
     *v. semiaurea*, *Ckll.*  
 730. *spartinae*, *Comst.*  
     *v. natalensis*, *Mask.*  
 731. *linteri*, *Comst.*  
     *v. betulae*, *Cooley.*  
 733. *prunicola*, *Mask.*<sup>(19)</sup>  
     *v. theae*, *Mask.*  
 1093. *agonis*, *Full.*  
 1094. *ethela*, *Full.*  
 1095. *xanthorrhavae*, *Full.*  
 1096. *saccharifoliae*, *Zehntner.*  
 1097. *depressa*, *Zehntner.*  
 1098. *howardi*, *Cooley.*  
 1099. *lounsburyi*, *Cooley.*  
 1100. *simplex*, *Green.*
- Aulacaspis*, *Ckll.***
658. *rosa*, *Bouché.*  
     *v. spinosa*, *Mask.*  
 659. *boisduvalii*, *Sign.*  
     *v. maculata*, *Ckll.*  
 1106. *montana*, *Ckll.*  
 1107. *miranda*, *Ckll.*  
 1108. ? *elegans*, *Leon.*
- Diaspis*, *Costa.***
1109. *gennadii*, *Leon.*  
 1110. *oleae*, *Colvce.*  
     651. *amygdali*, *Tryon.*  
         *v. rubra*, *Mask.*  
 1111. *persimilis*, *Ckll.*  
 1112. *baccharidis*, *Towns. & Ckll.*  
 1113. *phoradendri*, *Ckll.*  
 1114. *crawii*, *Ckll.*  
 1115. *agraræ*, *Green.*  
 1116. *loranthi*, *Green.*  
     *s. g. Epidiaspis*, *Ckll.*  
 1117. *piricola*, *Del Guercio.*  
         *s. fallax*, *Horvath.*  
 1118. *snowii*, *Hunder.*<sup>(20)</sup>
- Howardia*, *Berl. & Leon.***
719. *bielavis*, *Comst.*
- Protodiaspis*, *Ckll.***
1119. *parvulus*, *Ckll.*

(16.) *Phenacaspis*, Cooley and Ckll., will be a new genus to include *P. nigra*, *chinensis*, *engelicæ*, etc., hitherto placed in *Chionaspis*. Mr. Cooley and the present writer agree that these forms have no genetic relationship with genuine *Chionaspis* except through *Aulacaspis* and *Diaspis*. I leave Mr. Cooley to publish the generic characters and classify the species.

(17.) Mr. Cooley is responsible for the synonymy.

(18.) According to Mr. Cooley.

(19.) Mr. Cooley finds that specimens of *C. prunicola* from Mr. Maskell are *Diaspis amygdali*. It is just possible that Maskell accidentally mixed the *Diaspis* with a genuine *Chionaspis*, however, and that *prunicola* may still be valid.

(20.) This could very well pass for *Aspidiotus anegulus*, did it not have a *Diaspis* male scale! *D. piricola*, in Europe, was long confounded with *Aspidiotus ostryaeformis*.